jupyter Project 5 Films Last Checkpoint: 3 hours ago (autosaved)

File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3 (ipykernel)

In [1]:
```
import pandas as pd
```

In [2]:
```
df = pd.read_excel("C:/Users/Hua/Downloads/film.xlsx")
df
```

Out[2]:

	Year	Length	Title	Subject	Actor	Actress	Director	Popularity	Awards	*Image
0	INT	INT	STRING	CAT	CAT	CAT	CAT	INT	BOOL	STRING
1	1990	111	Tie Me Up! Tie Me Down!	Comedy	Banderas, Antonio	Abril, Victoria	False	68	No	NicholasCage.png
2	1991	113	High Heels	Comedy	False	Abril, Victoria	False	68	No	NicholasCage.png
3	1983	104	Dead Zone, The	Horror	Walken, Christopher	Adams, Brooke	Cronenberg, David	79	No	NicholasCage.png
4	1979	122	Cuba	Action	Connery, Sean	Adams, Brooke	Lester, Richard	6	No	seanConnery.png
...	...	...	...	...	...	...	...	...	...	...
1655	1932	226	Shadow of the Eagle, The	Action	Wayne, John	NaN	NaN	19	No	johnWayne.png
1656	1989	103	Blood & Guts	Action	Welles, Orson	NaN	NaN	43	No	NicholasCage.png
1657	1993	78	Hot Money	Drama	Welles, Orson	NaN	NaN	19	No	NicholasCage.png
1658	1977	75	Comedy Tonight	Comedy	Williams, Robin	NaN	NaN	18	No	NicholasCage.png
1659	1991	65	Robin Williams	Comedy	Williams, Robin	NaN	NaN	4	No	NicholasCage.png

1660 rows × 10 columns

In [6]:
```
df = df.head(10)
df
```

Out[6]:

	Year	Length	Title	Subject	Actor	Actress	Director	Popularity	Awards	*Image
0	INT	INT	STRING	CAT	CAT	CAT	CAT	INT	BOOL	STRING
1	1990	111	Tie Me Up! Tie Me Down!	Comedy	Banderas, Antonio	Abril, Victoria	False	68	No	NicholasCage.png
2	1991	113	High Heels	Comedy	False	Abril, Victoria	False	68	No	NicholasCage.png
3	1983	104	Dead Zone, The	Horror	Walken, Christopher	Adams, Brooke	Cronenberg, David	79	No	NicholasCage.png
4	1979	122	Cuba	Action	Connery, Sean	Adams, Brooke	Lester, Richard	6	No	seanConnery.png
5	1978	94	Days of Heaven	Drama	Gere, Richard	Adams, Brooke	Malick, Terrence	14	No	NicholasCage.png
6	1983	140	Octopussy	Action	Moore, Roger	Adams, Maud	Glen, John	68	No	NicholasCage.png
7	1984	101	Target Eagle	Action	Connors, Chuck	Adams, Maud	False	14	No	NicholasCage.png
8	1989	99	American Angels: Baptism of Blood, The	Drama	Bergen, Robert D.	Adams, Trudy	Sebastian, Beverly	28	No	NicholasCage.png
9	1995	104	Subway	Drama	Lambert, Christopher	Adjani, Isabelle	Besson, Luc	6	No	NicholasCage.png
10	1990	149	Camille Claudel	Drama	False	Adjani, Isabelle	Nuytten, Bruno	32	No	NicholasCage.png
11	1982	188	Fanny and Alexander	Drama	False	Adolphson, Kristina	Bergman, Ingmar	81	Yes	Bergman.png
12	1962	117	Tragedy of a Ridiculous Man	Drama	Tognazzi, Ugo	Aimee, Anouk	Berlusconi, Bernardo	17	No	NicholasCage.png
13	1966	103	A Man & a Woman	Drama	Trintignant, Jean-Louis	Aimee, Anouk	Lelouch, Claude	46	Yes	NicholasCage.png
14	1966	112	A Man & a Woman: Twenty Years Later	Drama	Trintignant, Jean-Louis	Aimee, Anouk	Lelouch, Claude	49	No	NicholasCage.png
15	1966	103	Un Hombre y una Mujer	Drama	Trintignant, Jean-Louis	Aimee, Anouk	Lelouch, Claude	6	Yes	NicholasCage.png
16	1995	112	Official Story, The	Drama	Alterio, Hector	Alexandro, Norma	Puenzo, Luiz	39	Yes	NicholasCage.png
17	1976	150	Lindbergh Kidnapping Case, The	Drama	Hopkins, Anthony	Alexander, Denise	Kulik, Buzz	51	No	AnthonyHopkins.png
18	1929	84	Blackmail	Mystery	Longden, John	Alyoid, Sara	Hitchcock, Alfred	2	No	alfredHitchcock.png
19	1963	109	Donovan's Reef	Comedy	Wayne, John	Allen, Elizabeth	Ford, John	62	No	johnWayne.png
20	1988	110	Tucker: The Man & His Dream	Drama	Bridges, Jeff	Allen, Joan	Coppola, Francis Ford	68	No	NicholasCage.png
21	1988	101	Scrooged	Comedy	Murray, Bill	Allen, Karen	Donner, Richard	15	No	NicholasCage.png
22	1981	116	Raiders of the Lost Ark	Action	Ford, Harrison	Allen, Karen	Spielberg, Steven	8	No	NicholasCage.png
23	1987	101	Running Man, The	Science Fiction	Schwarzenegger, Arnold	Alonso, Maria Conchita	Glaser, Paul Michael	31	No	NicholasCage.png
24	1991	105	Predator 2	Action	Glover, Danny	Alonso, Maria Conchita	Hopkins, Stephen	79	No	NicholasCage.png
25	1988	127	Colors	Drama	Penn, Sean	Alonso, Maria Conchita	Hopper, Dennis	23	No	NicholasCage.png
26	1990	97	Zandalee	Drama	Cage, Nicolas	Anderson, Erika	Pillsbury, Sam	80	No	NicholasCage.png
27	1958	108	Miles from Home	Drama	Anderson, Kevin	Anderson, Jo	Sinise, Gary	53	No	NicholasCage.png
28	1980	NaN	Happy Birthday to Me	Horror	Ford, Glenn	Anderson, Melissa Sue	Thompson, J. Lee	88	No	glennFord.png
29	1989	88	Final Notice	Mystery	Gerard, Gil	Anderson, Melody	Stern, Steven Hilliard	88	No	NicholasCage.png
30	1979	110	Quintet	Drama	Newman, Paul	Andersson, Bibi	Altman, Robert	19	No	paulNewman.png
31	1960	90	Devil's Eye, The	Drama	Kulle, Jarl	Andersson, Bibi	Bergman, Ingmar	20	No	Bergman.png
32	1957	91	Wild Strawberries	Drama	False	Andersson, Bibi	Bergman, Ingmar	42	Yes	Bergman.png
33	1956	96	Seventh Seal, The	Drama	Sydow, Max von	Andersson, Bibi	Bergman, Ingmar	62	No	Bergman.png
34	1992	90	Germicide	Drama	Taylor, Rod	Andersson, Bibi	NaN	36	No	NicholasCage.png
35	1955	86	Dreams	Drama	False	Andersson, Harriet	Bergman, Ingmar	14	No	Bergman.png
36	1955	95	Naked Night, The	Drama	False	Andersson, Harriet	Bergman, Ingmar	38	No	Bergman.png
37	1962	91	Through a Glass Darkly	Drama	False	Andersson, Harriet	Bergman, Ingmar	64	Yes	Bergman.png
38	1972	91	Cries & Whispers	Drama	Josephson, Erland	Andersson, Harriet	Bergman, Ingmar	18	Yes	Bergman.png
39	1958	104	Barbarian & the Geisha, The	Action	Wayne, John	Ando, Eiko	Huston, John	52	No	johnWayne.png
40	1967	130	Casino Royale	Comedy	Niven, David	Andress, Ursula	Hughes, Ken	11	No	NicholasCage.png
41	1962	NaN	Dr. No	Action	Connery, Sean	Andress, Ursula	Young, Terence	7	No	seanConnery.png
42	1954	103	Elephant Walk	Drama	Finch, Peter	Andrews, Dana	NaN	11	No	NicholasCage.png
43	1979	121	Ten	Comedy	Moore, Dudley	Andrews, Julie	Edwards, Blake	60	No	NicholasCage.png
44	1983	118	Man Who Loved Women, The	Comedy	Reynolds, Burt	Andrews, Julie	Edwards, Blake	67	No	NicholasCage.png
45	1966	190	Hawaii	Drama	Sydow, Max von	Andrews, Julie	Hill, George Roy	8	No	NicholasCage.png
46	1966	125	Torn Curtain	Mystery	Newman, Paul	Andrews, Julie	Hitchcock, Alfred	35	No	paulNewman.png
47	1996	107	Duet for One	Drama	Bates, Alan	Andrews, Julie	Korschakovsky, andrei	82	No	NicholasCage.png
48	1995	172	Sound of Music, The	Music	Plummer, Christopher	Andrews, Julie	Wise, Robert	59	Yes	NicholasCage.png
49	1995	55	Gonzo Presents Muppet Vision Stuff	Comedy	Cleese, John	Andrews, Julie	NaN	88	No	NicholasCage.png

In [5]:
```
df.describe()
```

Out[5]:

	Year	Length	Title	Subject	Actor	Actress	Director	Popularity	Awards	*Image
count	50	48	50	50	50	50	47	50	50	50
unique	30	37	50	8	38	25	34	37	3	9
top	1988	103	STRING	Drama	False	Andrews, Julie	Bergman, Ingmar	68	No	NicholasCage.png
freq	4	3	1	27	7	7	8	4	41	32

In [8]:
```
df.shape
```

Out[8]: (50, 10)

In [11]:
```
df["Popularity"].mean
```

Out[11]:
```
<bound method NDFrame._add_numeric_operations.<locals>.mean of 0      INT
1       68
2       68
3       79
4        6
5       14
6       68
7       14
8       28
9        6
10      32
11      81
12      17
13      46
14      49
15       6
16      39
17      51
18       2
19      62
20      68
21      15
22       8
23      31
24      79
25      23
26      80
27      53
28      80
29      88
30      19
31      20
32      42
33      62
34      36
35      14
36      38
37      64
38      18
39      52
40      11
41       7
42      11
43      60
44      67
45       8
46      35
47      82
48      59
49      88
Name: Popularity, dtype: object>
```

In [16]:
```
df["Popularity"].describe
```

Out[16]:
```
<bound method NDFrame.describe of 0      INT
1       68
2       68
3       79
4        6
5       14
6       68
7       14
8       28
9        6
10      32
11      81
12      17
13      46
14      49
15       6
16      39
17      51
18       2
19      62
20      68
21      15
22       8
23      31
24      79
25      23
26      80
27      53
28      80
29      88
30      19
31      20
32      42
33      62
34      36
35      14
36      38
37      64
38      18
39      52
40      11
41       7
42      11
43      60
44      67
45       8
46      35
47      82
48      59
49      88
Name: Popularity, dtype: object>
```

In [18]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1660 entries, 0 to 1659
Data columns (total 10 columns):
 #   Column      Non-Null Count  Dtype
---  ------      --------------  -----
 0   Year        1660 non-null   object
 1   Length      1593 non-null   object
 2   Title       1660 non-null   object
 3   Subject     1658 non-null   object
 4   Actor       1652 non-null   object
 5   Actress     1282 non-null   object
 6   Director    1487 non-null   object
 7   Popularity  1654 non-null   object
 8   Awards      1660 non-null   object
 9   *Image      1660 non-null   object
dtypes: object(10)
memory usage: 129.8+ KB
```

In [19]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 50 entries, 0 to 49
Data columns (total 10 columns):
 #   Column      Non-Null Count  Dtype
---  ------      --------------  -----
 0   Year        50 non-null     object
 1   Length      48 non-null     object
 2   Title       50 non-null     object
 3   Subject     50 non-null     object
 4   Actor       50 non-null     object
 5   Actress     50 non-null     object
 6   Director    47 non-null     object
 7   Popularity  50 non-null     object
 8   Awards      50 non-null     object
 9   *Image      50 non-null     object
dtypes: object(10)
memory usage: 4.0+ KB
```

In [7]:
```
df6 = df.fillna(method="ffill")
df6
```

Out[7]:

	Year	Length	Title	Subject	Actor	Actress	Director	Popularity	Awards	*Image
0	INT	INT	STRING	CAT	CAT	CAT	CAT	INT	BOOL	STRING
1	1990	111	Tie Me Up! Tie Me Down!	Comedy	Banderas, Antonio	Abril, Victoria	False	68	No	NicholasCage.png
2	1991	113	High Heels	Comedy	False	Abril, Victoria	False	68	No	NicholasCage.png
3	1983	104	Dead Zone, The	Horror	Walken, Christopher	Adams, Brooke	Cronenberg, David	79	No	NicholasCage.png
4	1979	122	Cuba	Action	Connery, Sean	Adams, Brooke	Lester, Richard	6	No	seanConnery.png
5	1978	94	Days of Heaven	Drama	Gere, Richard	Adams, Brooke	Malick, Terrence	14	No	NicholasCage.png
6	1983	140	Octopussy	Action	Moore, Roger	Adams, Maud	Glen, John	68	No	NicholasCage.png
7	1984	101	Target Eagle	Action	Connors, Chuck	Adams, Maud	False	14	No	NicholasCage.png
8	1989	99	American Angels: Baptism of Blood, The	Drama	Bergen, Robert D.	Adams, Trudy	Sebastian, Beverly	28	No	NicholasCage.png
9	1995	104	Subway	Drama	Lambert, Christopher	Adjani, Isabelle	Besson, Luc	6	No	NicholasCage.png
10	1990	149	Camille Claudel	Drama	False	Adjani, Isabelle	Nuytten, Bruno	32	No	NicholasCage.png
11	1982	188	Fanny and Alexander	Drama	False	Adolphson, Kristina	Bergman, Ingmar	81	Yes	Bergman.png
12	1962	117	Tragedy of a Ridiculous Man	Drama	Tognazzi, Ugo	Aimee, Anouk	Berlusconi, Bernardo	17	No	NicholasCage.png
13	1966	103	A Man & a Woman	Drama	Trintignant, Jean-Louis	Aimee, Anouk	Lelouch, Claude	46	Yes	NicholasCage.png
14	1966	112	A Man & a Woman: Twenty Years Later	Drama	Trintignant, Jean-Louis	Aimee, Anouk	Lelouch, Claude	49	No	NicholasCage.png
15	1966	103	Un Hombre y una Mujer	Drama	Trintignant, Jean-Louis	Aimee, Anouk	Lelouch, Claude	6	Yes	NicholasCage.png
16	1995	112	Official Story, The	Drama	Alterio, Hector	Alexandro, Norma	Puenzo, Luiz	39	Yes	NicholasCage.png
17	1976	150	Lindbergh Kidnapping Case, The	Drama	Hopkins, Anthony	Alexander, Denise	Kulik, Buzz	51	No	AnthonyHopkins.png
18	1929	84	Blackmail	Mystery	Longden, John	Alyoid, Sara	Hitchcock, Alfred	2	No	alfredHitchcock.png
19	1963	109	Donovan's Reef	Comedy	Wayne, John	Allen, Elizabeth	Ford, John	62	No	johnWayne.png
20	1988	110	Tucker: The Man & His Dream	Drama	Bridges, Jeff	Allen, Joan	Coppola, Francis Ford	68	No	NicholasCage.png
21	1988	101	Scrooged	Comedy	Murray, Bill	Allen, Karen	Donner, Richard	15	No	NicholasCage.png
22	1981	116	Raiders of the Lost Ark	Action	Ford, Harrison	Allen, Karen	Spielberg, Steven	8	No	NicholasCage.png
23	1987	101	Running Man, The	Science Fiction	Schwarzenegger, Arnold	Alonso, Maria Conchita	Glaser, Paul Michael	31	No	NicholasCage.png
24	1991	105	Predator 2	Action	Glover, Danny	Alonso, Maria Conchita	Hopkins, Stephen	79	No	NicholasCage.png
25	1988	127	Colors	Drama	Penn, Sean	Alonso, Maria Conchita	Hopper, Dennis	23	No	NicholasCage.png
26	1990	97	Zandalee	Drama	Cage, Nicolas	Anderson, Erika	Pillsbury, Sam	80	No	NicholasCage.png
27	1958	108	Miles from Home	Drama	Anderson, Kevin	Anderson, Jo	Sinise, Gary	53	No	NicholasCage.png
28	1980	88	Happy Birthday to Me	Horror	Ford, Glenn	Anderson, Melissa Sue	Thompson, J. Lee	88	No	glennFord.png
29	1989	88	Final Notice	Mystery	Gerard, Gil	Anderson, Melody	Stern, Steven Hilliard	88	No	NicholasCage.png
30	1979	110	Quintet	Drama	Newman, Paul	Andersson, Bibi	Altman, Robert	19	No	paulNewman.png
31	1960	90	Devil's Eye, The	Drama	Kulle, Jarl	Andersson, Bibi	Bergman, Ingmar	20	No	Bergman.png
32	1957	91	Wild Strawberries	Drama	False	Andersson, Bibi	Bergman, Ingmar	42	Yes	Bergman.png
33	1956	96	Seventh Seal, The	Drama	Sydow, Max von	Andersson, Bibi	Bergman, Ingmar	62	No	Bergman.png
34	1992	90	Germicide	Drama	Taylor, Rod	Andersson, Bibi	Bergman, Ingmar	36	No	NicholasCage.png
35	1955	86	Dreams	Drama	False	Andersson, Harriet	Bergman, Ingmar	14	No	Bergman.png
36	1955	95	Naked Night, The	Drama	False	Andersson, Harriet	Bergman, Ingmar	38	No	Bergman.png
37	1962	91	Through a Glass Darkly	Drama	False	Andersson, Harriet	Bergman, Ingmar	64	Yes	Bergman.png
38	1972	91	Cries & Whispers	Drama	Josephson, Erland	Andersson, Harriet	Bergman, Ingmar	18	Yes	Bergman.png
39	1958	104	Barbarian & the Geisha, The	Action	Wayne, John	Ando, Eiko	Huston, John	52	No	johnWayne.png
40	1967	130	Casino Royale	Comedy	Niven, David	Andress, Ursula	Hughes, Ken	11	No	NicholasCage.png
41	1962	130	Dr. No	Action	Connery, Sean	Andress, Ursula	Young, Terence	7	No	seanConnery.png
42	1954	103	Elephant Walk	Drama	Finch, Peter	Andrews, Dana	Young, Terence	11	No	NicholasCage.png
43	1979	121	Ten	Comedy	Moore, Dudley	Andrews, Julie	Edwards, Blake	60	No	NicholasCage.png
44	1983	118	Man Who Loved Women, The	Comedy	Reynolds, Burt	Andrews, Julie	Edwards, Blake	67	No	NicholasCage.png
45	1966	190	Hawaii	Drama	Sydow, Max von	Andrews, Julie	Hill, George Roy	8	No	NicholasCage.png
46	1966	125	Torn Curtain	Mystery	Newman, Paul	Andrews, Julie	Hitchcock, Alfred	35	No	paulNewman.png
47	1996	107	Duet for One	Drama	Bates, Alan	Andrews, Julie	Korschakovsky, andrei	82	No	NicholasCage.png
48	1995	172	Sound of Music, The	Music	Plummer, Christopher	Andrews, Julie	Wise, Robert	59	Yes	NicholasCage.png
49	1995	55	Gonzo Presents Muppet Vision Stuff	Comedy	Cleese, John	Andrews, Julie	Wise, Robert	88	No	NicholasCage.png

In [ ]: